

**Executive Order VR-202-E  
Healy Phase II EVR System  
Including In-Station (ISD) Systems**

**Exhibit 10  
INCON VRM Operability Test Procedure**

The following procedures shall be used at field sites to determine the operability of the INCON VRM system to satisfy the requirements documented in VAPOR RECOVERY CERTIFICATION PROCEDURE, CP-201, CERTIFICATION PROCEDURE FOR VAPOR RECOVERY SYSTEMS AT GASOLINE DISPENSING FACILITIES. Testing the VRM equipment in accordance with this procedure will verify the equipment's operability for Vapor Containment Monitoring and Vapor Collection Monitoring.

The INCON Vapor Recovery Monitoring system uses Self Testing functions to verify the proper selection, setup, and operation of the console modules and sensors. Upon a detection of a failed module or sensor, the VRM system will follow the assessment period alarming sequencing for the particular device and will shutdown the dispenser(s).

- Vapor Flow Meter or Probe Module Failure will issue a Daily A/L Warning/Failure after day 1 and 2. A shutdown of the dispenser will follow day 2.
- A Vapor Pressure Sensor or 4-20mA Module failure will follow the Weekly Pressure Monitoring Warning/Failure after week 1 and 2. A shutdown of all the dispensers will follow week 2.
- A shutdown of the console, incorrect setup mapping of sensors, or failure of Console Modules not listed above will not complete test or report passing test results.

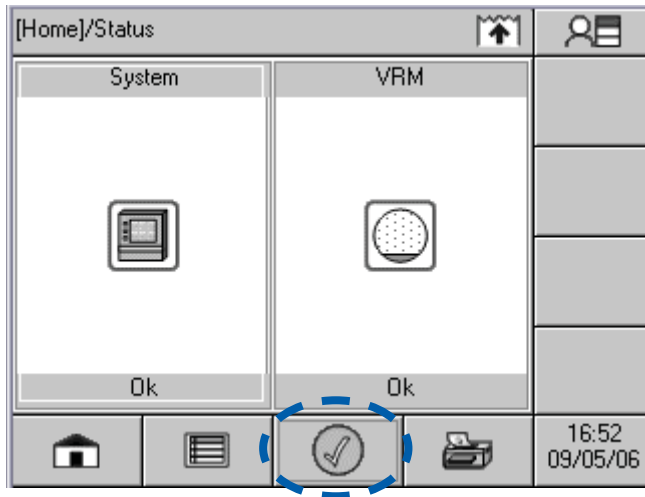
Franklin Fueling recommends printing a copy of the VRM DAILY report and viewing the VRM STATUS page on either the touch-screen display or web page periodically to determine that compliance tests are being completed in accordance with local and state regulations.

A step-by-step worksheet for recording data from the following operability tests is provided at the end of this Exhibit.

## Active Alarm Check and Printout

The purpose of checking the active alarm list is to see if there are any current alarms in the system. If there are then these issues may need to be corrected before running any operability tests.

To check the active alarm list, look to see if the alarm icon on the LCD of the Console is showing a Check Mark or Exclamation Point. If the Alarm icon is showing a Check Mark as shown below, then there are no active alarms. If there is an exclamation point icon showing then press the icon to view the alarms. At this point a printout of the alarms can be done by pressing the Print Icon.



## **Dispenser Shutdown Mapping Verification**

This is a procedure to test the shutdown feature of the INCON VRM System. The purpose is to verify the dispenser mapping for proper shutdown.

This procedure can be done from either the touch-screen or the web page.

### **Dispenser Shutdown Test via Touch Screen Display:**

1. Navigate to the dispenser status page by the following steps:
  - a. Selecting the VRM Application icon
  - b. Selecting the Sub-menu icon
  - c. Selecting the Dispensers icon
2. Once at the Dispenser Status page, if you touch one of the dispenser icons, a message will ask you if you want to disable that dispenser. If you press the OK button then the dispenser will shutdown.
3. Verify the Dispenser under test is disabled and fuel cannot be pumped. From the Dispenser Status page, the dispenser under test should show "Shutdown".
4. Once verified, if you press the same Dispenser again, a message will ask if you want enable Dispenser 1. Select "Yes" and the dispenser should come back to normal operation.
5. If the Dispenser under test did not shutdown or the wrong dispenser shutdown, then the wiring and setup should be checked and Steps 1 - 4 run again.
6. Repeat Steps 1 - 5 for all dispensers and record the results in the Test Form.

### Dispenser Shutdown Test via Web Pages

The dispenser shutdown test can alternatively be run through the web pages. The following procedure can be done from either the LCD or the web page.

From the Web Page:

1. This procedure requires administrator privileges.
2. Navigate to the dispenser status page. [http://ip\\_address/vrm\\_status.html](http://ip_address/vrm_status.html)
3. In the **Dispenser Status** column, select the Dispenser under test. A message will appear asking if you want to disable the dispenser, click "OK".
4. Verify the Dispenser under test is disabled and fuel cannot be pumped. From the Dispenser Status page, the dispenser under test should show "Shutdown".
5. Once verified, if you press the same Dispenser again, a message will ask if you want enable Dispenser 1. Select "Yes" and the dispenser should come back to normal operation.
6. If the Dispenser under test did not shutdown or the wrong dispenser was shutdown, then the wiring and setup should be checked and Steps 1 - 5 run again.
7. Repeat Steps 1 - 6 for all dispensers and record the results in the Test Form.

## Vapor Flow Meter V/L Check (Assist)

To verify the Vapor Flow Meters (VFM) is operating correctly, a technician will need to run the Exhibit 5 as listed in the executive order.

**Note 1:** Only one fueling point is needed to verify each VFM.

**Note 2:** It is recommended the Healy Dispenser Vapor Line Integrity Test and a Pressure Decay Test per TP-201.3 must have passed prior to running this procedure.

Follow this procedure to validate the INCON VFM is within proper range of a reference measurement. Fill out the INCON VRM Operability Test Form as required. These procedures must be run for each VFM. When generating an V/L on a fueling point, be sure to stop dispensing from the opposite side of the dispenser. Other dispensers may be allowed to run normally.

1. Beginning at the first dispenser, run a V/L per Exhibit 5 of Executive Order VR-202-E.
  - a. Record on the Test Form the V/L value from the reference test fixture.
  - b. Record on the Test Form the V/L value from the INCON Console.

*This value is located on the Dispenser Status page, refer to Figure 1 to navigate to that screen. This status page will show the last V/L run for each fueling point. Note that the very next fueling transaction on the same fueling point will overwrite the screen V/L value.*
  - c. Subtract the V/L value from Steps a and b and record the difference on the Test Form.
2. Is the value from Step c less than -0.15 or greater than +0.15? If yes, then proceed to the next step. Otherwise, the test passes.
3. Following Exhibit 5, run an additional two V/Ls.
  - d. Record on the Test Form the two V/L values from the reference test fixture.
  - e. Calculate the average of the three V/L values from the reference fixture.
  - f. Record on the Test Form the two V/L values from the INCON Console.
  - g. Calculate the average of the three V/L values from the INCON Console.
  - h. Subtract the average V/L value of Step E from Step G.
4. Is the value from Step h less than -0.15 or greater than +0.15? If yes, then refer to the VRM Troubleshooting and Diagnostics Guide for possible causes of bad readings. Otherwise, the test passes.

## Vapor Pressure Sensor Offset Check (Ambient Check)

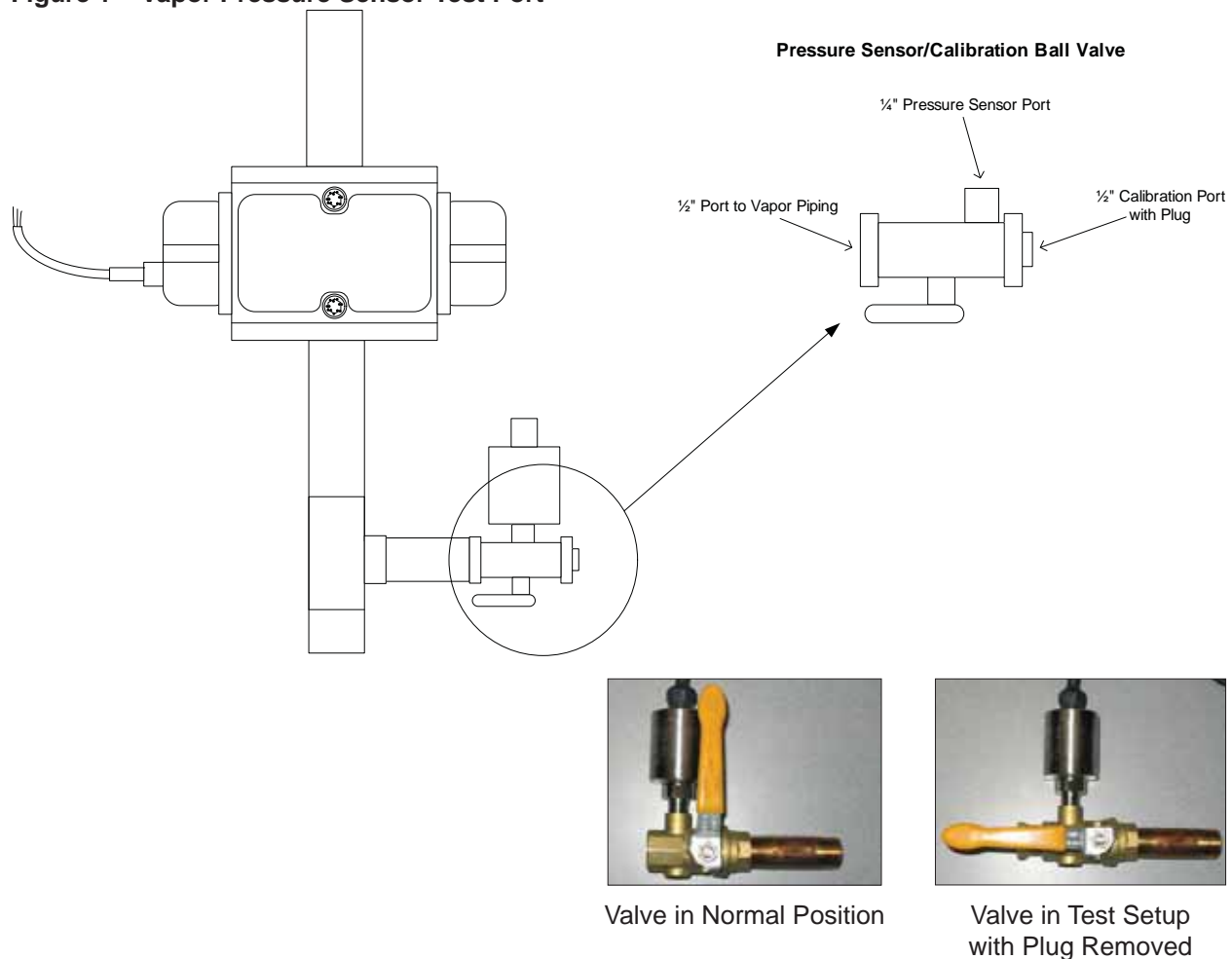
A Vapor Pressure Sensor (VPS) offset check will need to be done to verify the pressure sensor's zero offset. This procedure is to be done after installation. This procedure may be done as part of troubleshooting a failure conditions as directed in the INCON VRM Troubleshooting and Diagnostics Manual. Use the following instructions to do the offset check.

Tools Needed:

- Adjustable Wrench

1. Turn the pressure sensor valve to the closed position. This isolates the pressure sensor from the ullage space.
2. Remove the calibration port plug with an adjustable wrench and leave the port open to atmosphere. Refer to Figure 1.
3. On the touch-screen display at the console or on the Web page, go to the *VRM»Status* page. With the pressure sensor open to atmosphere check to see if the pressure is within  $\pm 0.10$ "wcg, if it is not then refer to the Troubleshooting and Diagnostics Guide.
4. Replace the calibration port plug and turn the ball valve to the open position.

**Figure 1 – Vapor Pressure Sensor Test Port**



# START-UP/NEW INSTALLATION FORM INCON VAPOR RECOVERY MONITORING SYSTEM

DATE \_\_\_\_\_

BOTH SIDES OF THIS TEST FORM MUST BE COMPLETED FOR ALL NEW INSTALLATIONS

*This form is not intended to be the Operability Test Procedure, rather its use is to provide the technician/installer with a form to record results. Follow the procedure as described in the Healy Phase II EVR System Including In-Station Diagnostics (ISD) System, Exhibit 10.*

## INCON VRM Startup Test Form – Side A

Service Company Name	Telephone Number
Service Technician	INCON Tech Cert #
Station Address	City
Dispenser Number	Vapor Pressure Sensor Serial #

Vapor Pressure Sensor Zero Offset Check		Check	Initials
A-1	Refer to the Vapor Pressure Sensor Offset Check procedures in this Exhibit.		
	1. Sensor test valve in closed position?		
	2. Calibration port plug was removed from test valve? Refer to Figure 2.		
	3. Record the pressure of the ullage containment area from the <b>VRM &gt; Status</b> page. Vapor Containment Area Pressure:  Is the Vapor Pressure within $\pm 0.10$ ? If YES, then proceed to Step 4, otherwise refer to the Troubleshooting and Diagnostics Guide.	_____ Yes/No	
	4. Is the pressure now within $\pm 0.10$ ? If NO, then refer to the VRM Troubleshooting and Diagnostics Manual.	Yes/No	

# START-UP/NEW INSTALLATION FORM INCON VAPOR RECOVERY MONITORING SYSTEM

DATE \_\_\_\_\_

BOTH SIDES OF THIS TEST FORM MUST BE COMPLETED FOR ALL NEW INSTALLATIONS  
EACH DISPENSER/VFM MUST HAVE A SEPARATE COPY OF THIS SIDE

## INCON ISD Operability Test Form – Side B

Service Company Name	Telephone Number
Service Technician	INCON Tech Cert #
Station Address	City
Dispenser Number	Vapor Flow Meter Serial #

Dispenser Mapping Test		Check	Initials
B-1	Refer to the Dispenser Shutdown Mapping Verification section of the ISD Operability Test Procedure.		
	Dispenser was shutdown properly?		
	Fuel was unable to be dispensed from nozzles?		
	Dispenser was re-enabled from console?		
	Fuel is able to be dispensed from nozzles?		

Vapor Flow Meter A/L Check		Yes/No	Initials
B-2	Refer to the Vapor Flow Meter V/L Check section of this ISD Operability Test Procedure. <b>Note 1:</b> This procedure is only required to be done on one fueling point per dispenser. <b>Note 2:</b> The Healy Dispenser Vapor Line Integrity Test and a TP-201.3 must have passed prior to running this test procedure.		
	1. Record the V/L from the test fixture and from the INCON VRM System. a. V/L Value from Test Fixture: b. V/L Value from ISD VRM: c. Difference between Steps A and B:	_____ _____ _____	
	2. Is the value of Step C greater than +0.15 or less than -0.15? If YES, then proceed to Step 3, otherwise the check passes.		
	3. Re-run the V/L test with the Air Inlet of the test fixture closed off. d. V/L Value # 2 from Reference: V/L Value # 3 from Reference: e. Average V/L from Reference: f. V/L Value # 2 from VRM Console: V/L Value # 3 from VRM Console: g. Average V/L from VRM Console: h. Difference between Steps E and G:	_____ _____ _____ _____ _____ _____	
	4. Is the value of Step H greater than +0.15 or less than -0.15? If YES, then refer to the VRM Troubleshooting and Diagnostics Guide for possible causes.		